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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/723,512	11/28/2000	Katsuki Minamino	450100-02864	4886

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EXAMINER

JACKSON, JAKIEDA R

ART UNIT PAPER NUMBER

2655

DATE MAILED: 04/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/723,512

Applicant(s)

MINAMINO, KATSUKI

Examiner

Jakieda R Jackson

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on January 10, 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,3-8,10 and 11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3-8 and 10-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Amendment*

1. In response to the Office Action mailed October 14, 2004, applicant submitted an amendment filed on January 10, 2005, in which the applicant traversed and requested reexamination and reconsideration with respect to **claims 1 and 10-11**.

### *Response to Arguments*

2. Applicant(s) argue that determining the growth state, including "the output of the camera", ***is clearly described*** in the specification from page 13, line 9 to page 14, line 14. However, the examiner disagrees. The passage described does not explain what kind of processing the camera output needs in order to determine whether to advance to the next node or to stay at that node, and one of ordinary skilled of the art would not know how the camera output effects the growth state. Therefore, the first paragraph of 35 U.S.C. 112 rejection is maintained.

Applicant(s) also argue that there is no discussion of "occurrence probability" of the predetermined action as determined by the growth state. However, the examiner disagrees. Edatsune teaches that the probability is high that the speaker's "Good morning" will be recognized as "Good night" (column 5, line 53 – column 6, line 3). Therefore, a probability of a certain action occurring is based on the growth state (as time passes; column 11, lines 8-32 and column 12, lines 23-40).

Applicant's arguments filed January 10, 2005 have been fully considered but they are not persuasive.

***Claim Rejections - 35 USC § 112***

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 1, 10 and 11** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. (The growth state being described in the specification does not teach that the growth state is being determined based on the basis of a camera input). Instead, the specification teaches that the growth occurs depending on the elapsed time (page 6). Also, the specification teaches that the camera takes an image of the surroundings and senses sounds including voices of the user in the surroundings (pages 7-10 and 13-14).

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. **Claims 1, 10 and 11** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention (i.e. said growth state being determined at least in part on the basis of a camera input).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. **Claims 1, 3-8 and 10-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Edatsune (U.S. Patent No. 5,802,488) in view of Imagawa et al. (U.S. Patent No. 6,353,764), hereinafter referenced as Imagawa.

Regarding **claims 1, 10 and 11**, Edatsune discloses an interactive speech recognition device, method and computer program (column 10, lines 35-42) disposed in a stuffed toy dog (figure 1A; column 4, lines 25-28) comprising:

speech recognition means for recognizing a speech (speech recognition unit, figure 1A, element 5; column 1, lines 49-55);

control means for controlling said speech recognition means (drive control unit; figure 1B, element 7) in accordance with a growth state of the robot (column 12, lines 23-56);

wherein said growth state is comprised of a plurality of nodes (levels) corresponding to increasing maturity levels for said robot (column 12, lines 23-56); and

wherein said robot determines and performs a predetermined action in accordance with the speech recognized by said speech recognition means (column 4,

line 62 column 5, line 5) and an occurrence probability of the predetermined action as determined by the growth state (column 5, line 60 – column 6, line 3 with column 11, lines 8-32 and column 12, lines 25-56), but lacks said growth state being determined at least in part on the basis of a camera input.

Imagawa discloses operating equipment inside a pet robot (column 4, lines 56-62) wherein said growth state being determined at least in part on the basis of a camera input (column 3, lines 41-56), to monitor physiological conditions.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Edatsune's device, method and computer program wherein said growth state being determined at least in part on the basis of a camera input, to improve accuracy and reliability of the detection of the person's position, posture, motion, age, sex, etc. (column 3, lines 41-64).

Regarding **claim 3**, Edatsune discloses an interactive speech recognition device, method and computer program wherein said control means (7) changes the recognition accuracy of said speech recognition means (5) in accordance with the growth state (changes in the level) of said robot (column 16, lines 35-42).

Regarding **claim 4**, Edatsune discloses an interactive speech recognition device, method and computer program wherein:

said speech recognition means (5) includes dictionary storage means (figure 3A, element 32) for storing a dictionary in which words to be recognized in speech recognition are described (responses; column 11, lines 8-32); and

said control means controls (7) said speech recognition (5) means such that the words described in the respective dictionaries are weighted in accordance with the growth state of said robot (weighting coefficients; column 9, lines 16-38) and speech recognition is performed using the weighted words (level of words change as toy grows; column 12, lines 23-56).

Regarding **claim 5**, Edatsune discloses everything as claimed above (claim 4), in addition discloses said speech recognition means includes dictionary storage means for storing a plurality of dictionaries (figure 2A, element 21, figure 3A, element 32 etc.) in which words to be recognized in speech recognition are described such that the words to be recognized are divided into groups (weighting coefficients, response content level etc.) and the respective groups of words are stored in different dictionaries (figure 2A, element 21, figure 3A, element 32 etc. and column 8, lines 22-29 and column 11, lines 17-20).

Regarding **claim 6**, Edatsune discloses an interactive speech recognition device, method and computer program wherein:

speech recognition means (5) includes dictionary storage means (32) for storing a dictionary in which words to be recognized in speech recognition are described (responses; column 11, lines 8-32) such that other words are linked to said words to be recognized ("Good Morning to G-o-o-d mor-ning; column 12, lines 23-32); and

said control means (7) controls said speech recognition means (5) such that another word linked to a word (column 12, lines 23-32), which is included in the dictionary (32) and which is obtained as a speech recognition result, is output as a final

speech recognition word depending upon the growth state of the robot (column 12, lines 23-32).

Regarding **claim 7**, Edatsune discloses an interactive speech recognition device, method and computer program wherein words to be recognized in speech recognition (5) are described in said dictionary such that said dictionary such that words are linked to other acoustically ("Good Morning to G-o-o-d mor-ning; column 12, lines 23-32) or semantically similar words.

Regarding **claim 8**, Edatsune discloses everything as claimed above (claim 1), in addition Edatsune suggest that control means (7) controls the maximum number of words to be described in said dictionary, in accordance with the growth state of said robot (column 12, lines 23-32).

9. **Claims 1, 10 and 11** are alternately rejected under 35 U.S.C. 103(a) as being unpatentable over Edatsune (U.S. Patent No. 5,802,488) in view of Pryor (U.S. Patent No. 6,766,036).

Regarding **claims 1, 10 and 11**, Edatsune discloses an interactive speech recognition device, method and computer program (column 10, lines 35-42) disposed in a stuffed toy dog (figure 1A; column 4, lines 25-28) comprising:

speech recognition means for recognizing a speech (speech recognition unit, figure 1A, element 5; column 1, lines 49-55);



control means for controlling said speech recognition means (drive control unit; figure 1B, element 7) in accordance with a growth state of the robot (column 12, lines 23-56);

wherein said growth state is comprised of a plurality of nodes (levels) corresponding to increasing maturity levels for said robot (column 12, lines 23-56); and

wherein said robot determines and performs a predetermined action in accordance with the speech recognized by said speech recognition means (column 4, line 62 column 5, line 5) and an occurrence probability of the predetermined action as determined by the growth state (column 5, line 60 – column 6, line 3 with column 11, lines 8-32 and column 12, lines 25-56), but lacks said growth state being determined at least in part on the basis of a camera input.

Pryor discloses camera based man machine interfaces wherein said growth state being determined at least in part on the basis of a camera input (column 3, lines 42-65), to determine face location and orientation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Edatsune's device, method and computer program wherein said growth state being determined at least in part on the basis of a camera input, to accurately determine face location and orientation which can determine if the human is a child, adult, the age etc. (column 3, lines 42-65).

***Conclusion***

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.


11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jakieda R Jackson whose telephone number is 571.272.7619. The examiner can normally be reached on Monday through Friday from 7:30 a.m. to 5:00p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Ometz can be reached on 571.272.7593. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2655

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JRJ  
April 19, 2005



DAVID L. OMETZ  
PRIMARY EXAMINER